REMARKS

These remarks are responsive to the Final Office Action[1] of January 21, 2005. Claims 1-33 were presented for examination and were finally rejected under 35 U.S.C. § 102(e) as being anticipated by Short (U.S. Patent No. 6,130,892, hereinafter "Short"). Claims 1, 11, 16, 21, 26, 31, and 32 are independent claims. No claims have been amended herein. No claims have been canceled. Claims 1-33 remain pending. The rejection is respectfully traversed because the Final Office Action misapplies Short for the following reasons.

In summary, Short may show multiple routers, but it does not show multiple address translators. At best, Short discloses only one address translator. Consequently, Short does not disclose or suggest Applicant's claimed subject matter which recites a first address translator and a second address translator. These are separate translators, defined as such by being referred to as "first" and "second". This limitation is recited in all independent claims and therefore is also imposed on all dependent claims. Short also does not disclose or suggest other elements of Applicant's claims. Applicant's stated position is developed and augmented in the discussion which follows.

In the Response to Arguments on page 9 in the Final Office Action, the Examiner states: "The Examiner finds Short did in fact disclose multiple nomadic routers, one on the client side and one on the server or the receiving side (see FIG 12 a-d)." Applicant

[1] The Final Office Action may contain a number of statements characterizing the cited reference(s) and/or the claims which Applicant(s) may not expressly identify herein. Regardless of whether or not any such statement is identified herein, Applicant(s) does not automatically subscribe to, or acquiesce in, any such statement. Further, silence with regard to rejection of a dependent claim, when such claim depends, directly or indirectly, from an independent claim which Applicant(s) deems allowable for reasons provided herein, is not acquiescence to such rejection of that dependent claim, but is recognition by Applicant(s) that such previously lodged rejection is moot based on remarks and/or amendments presented herein relative to that independent claim.

respectfully disagrees that this Figure shows multiple nomadic routers, one on the client side and one on the server side because router 26 is not a nomadic router. Router 26 is a conventional router. *See* column 11, lines 9-10 "The LAN 14 is connected through a conventional router 26 to the internet 28." (Emphasis added). Router 26 is the only other router shown in Fig. 12 A-D, wherefore the Examiner's reference to this Fig. as showing multiple nomadic routers is plainly wrong.

However, Applicant agrees that Short may disclose multiple nomadic routers, but that does not equate to a disclosure of multiple address translators, as explained below. For example, in Fig. 2 of Short, portable nomadic router 10 is shown in the center of the drawing and what is understood to be a fixed nomadic router, ("FIXED NR", but otherwise un-designated), is shown in the lower left of the drawing connected to Internet/Intranet/Subnet 14. Presumably, in this configuration, two nomadic routers are used in Short which handle the situation where the client or laptop-user may be traveling and located remotely from its LAN[2]. The router in physical proximity with the laptop computer belonging to the traveling user is termed the "portable nomadic router" and the router in close physical proximity to the LAN is termed the "fixed nomadic router". Although these are two physically-separate routers, and possibly separated by great distances, they have much in common.

> "The Fixed nomadic router provides the same basic functionality and architecture as the portable nomadic router but is stored in one location. The fixed nomadic router acts as a surrogate or "Home Agent" for the user when he/she is away on travel. When the user wishes to register or utilize their host device elsewhere in the network, the portable nomadic router will register with

---

2 The purpose of Short is to allow a laptop computer or other portable terminal, which is configured to be connected to a local home network or LAN, to be connected to any location on the Internet. (Short, col. 1, line 65 - col. 2, line 3) Thus, all communication from and to a remote client's laptop computer is with network devices associated with that local home network or LAN.

> the fixed nomadic router where it is temporarily attached to the network so information can be forwarded to the user's new location." (Short, Col. 16, lines 30-38)

Accordingly, the two routers have the same basic functionality and architecture. The fixed nomadic router is a "surrogate" or "Home Agent", i.e., a temporary substitute, for the portable nomadic router when the portable nomadic router is "on the road". The portable nomadic router registers with the fixed nomadic router to enable information, for example, from other users in the LAN to forward their messages to the traveling user's laptop or other computer at its new location.

Because of the "surrogate" nature of the fixed nomadic router, the function which it performs is very limited. Consequently, although two routers are employed in the configuration discussed above, the only translation function occurs in the portable nomadic router, not in the fixed nomadic router. This is clear from a careful reading of the packet translation explanation provided in Short in column 13, line 15 through column 14, line 39.

> "For outbound traffic from the host computer 12 to the network 14, the translation function changes the content of the packet such as the source address, checksum, and application specific parameters, causing all packets sent out to the network 14 to be directed back to the nomadic router 10 rather than to the host computer 12." (col. 13, lines 19-25)

The above section describes the essential translation function in Short for packets originating with the remote laptop-computer user. Referring to Fig. 2 in Short, host computer 12 at the top of the drawing sends outbound traffic to network 14 at the bottom of the drawing, that traffic first having to pass through portable nomadic router 10. However, portable nomadic router 10 changes (translates the address of) the packet

before it allows the packet to pass therethrough, to cause any return packet to be directed to the address of router 10 rather than to the address of host computer (laptop) 12.

> "The inbound traffic from the network 14 arriving at the nomadic router 10, which is really for the host computer 12, is passed through the translation function so the host computer 12 thinks that the replies were sent directly to it. The host computer 12 will be completely unaware of all the translation being performed by the nomadic router 10." (col. 13, lines 25-30)

The above section describes the essential translation function in Short for packets originating with other users in the local home network or LAN and arriving at nomadic router 10 via network 14.

Neither of the two above-quoted sections (nor anyplace else in Short) describes any translation being performed anywhere else in the communication path. The only translations being described are the forward and reverse translations, both of which occur in portable nomadic router 10.

The following section also describes the operation when packets are returned to the portable nomadic router.

> "*When a reply packet comes in from the network 14*, as shown in step 9 [Fig. 9B] the nomadic router 10 will receive the packet. In step 10, [Fig. 9B] the *nomadic router 10 will perform the reverse network layer translation* to set the destination address to that of the host computer 12 rather than the nomadic router's address, and any source address to that replaced by the nomadic router 10 in step 5." (col. 14, lines 23-29, Emphasis and Fig. references added.)

The above section describes the reverse translation performed by the same portable nomadic router 10, but on *reply* packets returning to the remote user, presumably from other users in the LAN. This is the same router which performed the forward translation when a packet was being sent out by the remote user to the LAN. Such a router, which does a forward translation on an outgoing packet and a reverse translation on a *different*

incoming packet is by no means equivalent to Applicant's first address translator doing a translation on an *outgoing* packet and a separate and second address translator doing the reverse of that translation *on the same outgoing* packet!

The Examiner cites this passage in the Final Office Action, but erroneously interprets this passage as being equivalent to two claim elements in Applicant's claim 1, namely: "translating the second destination address back to the first destination address (in the form of reverse translation) and forwarding the data packet to the server using the first destination address (col. 14, lines 23-35)." (*see* Final Office Action, page 3, top). As noted above, in Applicant's invention, the "reverse translation" takes place on the same data packet that was sent by Applicant's client, to get that data packet to its ultimate server destination. But, by contrast, in Short, the "reverse translation" takes place on a different reply packet which underscores the fact that the purpose and operation of Short are entirely different from that of Applicant.

Short is directed to a portable "Nomadic" router which enables a client's laptop computer or other portable terminal which is configured to be connected to a local home network, to be connected to any location on the Internet or other digital data communication system. The entire purpose of Short is to accommodate portability of a computer, such as a laptop, without requiring reconfiguration for each network it plugs into. (Short, column 1, line 49 to column 2, line 19). It thus has nothing to do with Applicant's purpose of mapping addresses in a network to confound network discovery.

By contrast, the purpose of Applicant's disclosure relates primarily to achieving secure transmissions – to mapping addresses in a network to confound network discovery. For example, hackers may attempt to infiltrate a company's internal network

using packet sniffers which are mechanisms that capture all traffic transmitted to and from, for example, the company's server. The hacker may use the illegally-obtained information to map the company's network, including identifying the company's network topology by observing address and ports being used in data packets transmitted to and from the server, and then use that topology information to access company confidential information or maliciously attack the company's network. (application, page 1). Applicant's claimed subject matter offers a solution to this security problem. The security purpose of Applicant's invention has nothing to do with the client-terminal portability purpose of Short

In order for Short to accomplish its purpose it needs only one translator, and that is what it discloses, although it may disclose two routers. In its Fig. 1, it shows nomadic router 10 (translator), shown in expanded format in its Fig. 2. Short does not contemplate multiple translators communicating directly (via a network) with each other in the manner used by Applicant to enable a client and server to talk to each other without unauthorized network discovery, since that has nothing to do with Short's purpose or function.

By contrast, in order for Applicant to accomplish its purpose, it needs at least two translators in communication with each other, in order to manipulate both source and destination addresses for purposes of confounding network discovery. For example, consider the scenario where a client intends to send a message to its server. In order to hide both the client's true address and the server's true address, a client-side translator substitutes its own address as the source address of the client and changes the destination address of the server to the address of a server-side translator. The message is then sent

from the client-side translator to, and received by, the server-side translator, possibly over the Internet. The server-side translator substitutes the true server address for its address and forwards the message to the server. See Applicant's Fig. 1 where, for example, client 110 sends a message via network 130 to client side address translator 120, and from there via Internet 160 to server-side address translator 140, and from there via network 170 to server 150. The reverse procedure is followed when the server replies to the client (application, page 15, lines 24-27). In this manner, only the client side and server side translator addresses are exposed to potential hackers over the Internet or other network connection. This cannot be accomplished with only one translator as shown in Short, although it has two routers.

Applicant's claims are not disclosed or suggested by Short. Applicant's Claim1, for example, recites, inter alia:

> "receiving in a first address translator a data packet from a client, the data packet including a first destination address; changing the first destination address to a second destination address in the first address translator; transmitting the data packet with the second destination address from the first address translator via the network; receiving in a second address translator the data packet transmitted via the network; translating the second destination address back to the first destination address in the second address translator; and forwarding the data packet from the second address translator to the server using the first destination address".

Note that *two different address translators* are recited in claim 1. In Applicant's Fig. 1 two address translators 120 and 140 are shown which are described in Applicant's specification. It is clear that Short does not disclose or suggest the subject matter recited in claim 1, at least for the reason that Short does not disclose or suggest any more than usage of one address translator, although it may disclose two routers.

MPEP 2131 indicates that to anticipate a claim, the reference must teach every element of the claim. In this case, Short does not teach each and every element of claim 1. Short does not teach the use of two address translators, much less in the manner described in the specification and claimed in claim 1. Specifically, Short does not teach: (1) changing the first *destination* address to a second *destination* address in the first address translator (it changes only the source address); (2) transmitting the data packet with the second *destination* address from the first address translator via the network (it does not change the destination address); (3) receiving in a second address translator the data packet transmitted via the network (there is no second address translator, only a second router); (4) translating the second destination address back to the first destination address in the second address translator (there is no second address translator, only a second router); and (5) forwarding the data packet from the second address translator to the server using the first destination address (there is no second address translator, only a second router). At best, Short teaches the changing of the Client's *source* address in its translator to the translator's address as a proxy source address, and does not event hint at changing destination addresses. Accordingly, the 35 U.S.C. § 102(e) rejection of claim 1 should be withdrawn and the claim allowed. Furthermore, a 35 U.S.C. § 103(a) rejection would also be improper since Short also does not *suggest* the subject matter of claim 1 for many reasons including that it has absolutely no need for two translators.

The other independent claims, namely claims 11, 16, 21, 26, 31, and 32 have been amended in the same or similar fashion to clearly indicate two separate address translators (and as noted in Applicant's specification, the translators can be hardware, software or a combination of each and can also be located separately from or included

within the host or server with which it is functioning). Accordingly the 35 U.S.C. § 102(e) rejection of these other independent claims should also be withdrawn. Since claims 2-10, 12-15, 17-20, 22-25, 27-30 and 33 depend from these independent claims, the 35 U.S.C. § 102(e) rejection of these dependent claims should also be withdrawn, at least by virtue of their dependency status from allowable base claims.

CONCLUSION

In view of the foregoing remarks explaining the salient differences between Applicant's claims and the applied reference, Applicant deems all pending claims allowable. Applicant respectfully requests reconsideration and allowance of the pending claims. Since there are no claim amendments herein, these remarks must be entered and considered under Rule 116.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 07-2347 and please credit any excess fees to such deposit account.

Verizon Services Group

By: _____
Joel Wall
Reg. No. 25,648

Date: March 21, 2005

Customer No. 32127
600 Hidden Ridge Drive
Mail Code: HQE03H14
Irving, Texas 75038
(972) 718-4800